

## REMARKS

The Office Action of December 20, 2004 has been received and its contents carefully considered.

The present Amendment revises some of the claims to improve their form under U.S. patent practice. Among other changes, the claims now refer to a "sequence" of data blocks rather than "continuous" data blocks since the accuracy of the word "continuous" seems somewhat questionable in the context of digital signals. Furthermore, since the term "data" can be either singular or plural, the claims now refer to "units of data" or "unit of data," as appropriate, to avoid possible ambiguity.

The present Amendment also adds new claims 11-16 to further protect the invention.

In addition, the present Amendment revises the specification to correct inadvertent informalities, and to insert terminology that now appears in the claims.

The Office Action rejects all of the claims for obviousness on the basis of Kondo in view of Chauffour et al (which will hereafter be called simply "Chauffour"). For the reasons discussed below, these rejections are respectfully traversed.

The Kondo reference is directed to an arrangement for modifying the time-scale of rhythm signals from a rhythm source. The Office Action draws attention to Figures 12A-12B of the reference, and takes the position that they show thinning out part of audio digital data on a data block basis.

The Chauffour reference is directed to a system for removing silence from packetized voice signals.

First, it is respectfully submitted that the references should not be combined since they are in non-analogous arts. Kondo pertains to the electronic-music art while Chauffour pertains to the network-communication art. It is not entirely clear from the Office Action which of these references is being used as the primary reference and which as the secondary reference. However, it is respectfully submitted that an ordinarily skilled person who wanted to improve Kondo's rhythm-modification system in some way would have had no reason to think that Chauffour's arrangement for reducing bandwidth needed for voice communication over an ATM network might have useful hints for such improvements. Alternatively, it is respectfully submitted that an ordinarily skilled person who wanted to improve Chauffour's voice communication arrangement in some way would have had no reason to think that Kondo's rhythm modification techniques might be useful. Since the references are in non-analogous arts, they should not be combined since an ordinarily skilled person would not be presumed to be aware of both of them.

Independent claim 1 recites "a thinning-out unit for thinning out part of the audio digital data on a data block basis." The Office Action takes the position that such thinning-out occurs in Figures 12A-12D of the Kondo reference. However, claim 1 also recites that each of the data blocks "consists of a predetermined number of units of data." Any "thinning" that might be done in the Kondo reference is not based on blocks with a predetermined number of units of data.

Claim 1 also recites "a conversion unit for varying the amplitude of either a sequence of units of data including ... or a sequence of units of data including ..., so that the last unit of data of the immediately preceding data block will be concatenated with the first unit of data of the immediately following data block along a smooth amplitude-

varying curve.” It should first be noted that the silence which Chauffour removes from voice signals has substantially no amplitude, so an ordinarily skilled person would likely think that voice intervals between silent intervals begin and end at substantially zero amplitude. Accordingly, an ordinarily skilled person would see no reason to vary the amplitude of units of data so that they will be concatenated along a smooth amplitude-varying curve. As for the cross-feed procedure shown in Kondo’s Figures 12A-12D, this seems inconsistent with Chauffour’s removal of silence intervals from speech signals.

Turning now to independent claim 6, this claim also recites “a thinning-out unit” and a “conversion unit” as in claim 1. Accordingly, it is patentable over Kondo and Chauffour for the same reasons.

Independent claim 11 recites “a thinning-out unit for removing data blocks” from a first sequence of data blocks (each of which consist of the same number of units of data) “to form a second sequence of data blocks, the data blocks of the second sequence having been separated in the first sequence by the removed data blocks.” It is respectfully submitted that such a thinning-out unit is not suggested by the cross-feed procedures shown in Kondo’s Figures 12A-12D. Nor is it suggested by Chauffour’s arrangement for removing silent intervals. Claim 11 also recites “a conversion unit for varying the amplitude of units of data adjacent boundaries between the data blocks of the second sequence so as to smooth transitions between the data blocks of the second sequence.” Such smoothing of amplitudes is not suggested by the references.

The Office Action also rejects all of the claims for obviousness on the basis of Davis in view of Chauffour. The Davis reference discloses a technique for smoothly splicing first and second audio signal segments together. Davis’ technique involves

calculating correlations for an edit point at different positions, and then selecting the best position as the edit point.

Independent claims 1 and 6 recite “a conversion unit for varying the amplitude ..., so that the last unit of data of the immediately preceding data block will be concatenated with the first unit of data of the immediately following data block along a smooth amplitude-varying curve.” It is respectfully submitted that Chauffour and Davis would not have suggested this to an ordinarily skilled person. If an ordinarily skilled person wanted to improve Chauffour’s arrangement in some way, he would have no reason to suspect that Davis’ technique for finding the best edit point would be useful. The reason is that, after the silent interval is removed from a voice signal in accordance with Chauffour, the voice segment immediately before the now-removed silent interval would end with substantially zero amplitude and the voice segment following the now-removed silent interval would start with approximately zero amplitude. An ordinarily skilled person would not think that there would be any occasion to find a splice point that avoids noise in accordance with Davis.

New independent claim 11 recites “a thinning-out unit for removing data blocks from the first sequence to form a second sequence of data blocks, the data blocks in the second sequence having been separated in the first sequence by the removed data blocks.” As Chauffour’s Figure 1 shows, removal of the silent interval does not result in a second sequence of patents that were originally separated by what has been removed.

Claim 11 also recites “a conversion unit for varying the amplitude of units of data adjacent boundaries between data blocks of the second sequence so as to smooth transitions between the data blocks of the second sequence.” An ordinarily skilled person

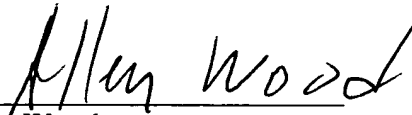
would appreciate that such smoothing is unnecessary in Chauffeur. In Davis, the best edit point is detected, and this effectively changes the length of an audio segment (although minutely) instead of maintaining the same length but changing the amplitude adjacent a boundary in order to reduce noise.

The remaining claims depend from the independent claims discussed above and recite additional limitations to further define the invention, so they are patentable along with their independent claims and need not be further discussed.

It is noted that an Information Disclosure Statement is being filed concurrently.

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowance. Reconsideration of the application is therefore respectfully requested.

Respectfully submitted,

A handwritten signature in black ink that reads "Allen Wood". The signature is written in a cursive, slightly slanted style.

Allen Wood

Registration No. 28,134

Customer No. 23995

(202) 326-0222

(202) 408-0924 (facsimile)

(202) 408-5297 (facsimile)

AW:rw